

REMARKS

Applicants request reconsideration of this application in view of the amendments above and the remarks below.

I. AMENDMENTS

A. Specification

Applicant has amended the paragraph below the Title of the application on the first page of the Specification to explicitly describe the relationship between this application and prior-filed application no. 60/273,974 (the "'974 application"). No new matter is introduced. Applicant claimed benefit of the '974 application in the Transmittal Letter accompanying the filing of the application on March 8, 2002 (copy enclosed at Tab A). On that date applicant also submitted a Preliminary Amendment that implicitly shows the relationship between this application and the '974 application (copy enclosed at Tab B). The Patent Office recognized the proper relationship between these two applications, as indicated in its April 2, 2002 Filing Receipt and its June 7, 2002 Updated Filing Receipt (copies enclosed at Tab C). Accordingly, the Patent Office has given this application the

benefit of priority of the '974 application. Thus, applicant does not believe that a Petition under 37 C.F. R. 1.78 (a) (6) is required. Please inform the undersigned applicant's representative immediately if such a Petition is required.

B. Claim Amendments

Claims 1-72 were pending at the time of the issuance of the April 12, 2005 Office Action. Applicant has canceled non-elected claims 8-20, 28-50, 52-68 and 70-72 without prejudice. Applicant has also cancel claims 7, 21, 24, 51 and 69 without prejudice. Applicant has amended claims 1, 3, 22 and 25-27 to more particularly point out and distinctly claim applicant's invention. Details of these claim amendments are discussed below. Applicant reserves the right to prosecute claims directed to the canceled subject matter in this application or in other applications that claims priority from this application or a related application. After entry of the claim amendments, claims 1-6, 22-23 and 25-27 are pending.

II. ELECTION/RESTRICTION

The Examiner has made final the restriction requirement. Applicant elected with traverse the invention of Group I for prosecution in this application in his January 11,

2005 Response to Restriction Requirement. Applicant has canceled herein the claims corresponding to the non-elected groups. Applicant has also amended claim 1 by incorporating into it the recitation "wherein said differentiated mammalian cell is genetically engineered by knocking out a gene required for differentiation into said particular lineage" from former claim 7. This amendment is supported by the application as filed (see, e.g., claims 1-7 as originally filed). Applicant believes that applicant has properly answered the restriction requirement.

III. CLAIM OBJECTIONS

The Examiner objected to the form of claim 24, for reasons detailed in the April 12, 2005 Office Action at pages 2-3. Applicant has cancelled claim 24, rendering moot this claim objection.

IV. 35 U.S.C. § 112, FIRST PARAGRAPH REJECTIONS (LACK OF ENABLEMENT)

For reasons detailed in the April 12, 2005 Office Action at pages 3-11, claims 1-7, 21-27, 51 and 69 stand rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the enablement requirement. Applicant traverses.

Applicant has amended claim 1 by incorporating into it the recitation "wherein said differentiated mammalian cell is genetically engineered by knocking out a gene required for differentiation into said particular lineage" from former claim 7. This amendment is supported by the application as filed (see, e.g., claims 1-7 as originally filed). Applicant has incorporated the recitation "wherein said recipient cell is an oocyte and wherein said recipient cell is from the same species as said differentiated mammalian cell or wherein said differentiated mammalian cell is human and said recipient cell is rabbit or bovine." This amendment is supported by the application as filed (see, e.g., the specification at page 20, paragraph 41). Amended claim 1 also recites that the donor cell is a fibroblast. This amendment is supported by the application as filed (see, e.g., the specification at page 10-11, paragraph 23). No new matter is introduced.

Applicant has also amended claim 25-27 such that they now depend from claim 1 rather than canceled claim 7. This amendment is supported by the application as filed (see, e.g., originally filed claims 1, 7 and 25-27).

Applicant has made these claim amendments solely to expedite prosecution of this application and applicant reserves the right to prosecute claims directed to any canceled subject matter in this application or in other applications that claims priority from this application or a related application.

The Examiner contends that applicant is not enabled for the scope of the pending claims with respect to which genes can be altered to result in a nuclear transfer embryo comprising of cells that are incapable of differentiating into a particular cell lineage; which cell types to use as a nuclear donor; which cells are suitable recipient cells, as the Examiner contends that limited number of which would be suitable; and performing gene targeting in any type of somatic cells. The Examiner also contends that cross-species nuclear transfer is not enabled.

Amended claim 1, and claims 2-6, 22-23 and 25-27 that depend from it, recites that the recipient cell is an oocyte, and that the recipient and donor cell be of the same species, and if not, then the donor cell is human and the recipient cell is either bovine or rabbit. Also, amended claim 1 recites that the donor cell is a fibroblast.

The Examiner has acknowledged that the specification enables an oocyte as a recipient cell (see the April 12, 2005 Office Action at pages 9). The Examiner has also acknowledged that the specification enables a fibroblast as a donor cell (see the April 12, 2005 Office Action at page 6). The Examiner also cites a reference showing gene targeting in fibroblast including fetal fibroblast (see the April 12, 2005 Office Action at pages 8-9). The Examiner does not contend that same-species nuclear transfer is not enabled. The specification enables cross-species nuclear transfer in at least the cases where the donor cell is human and the recipient cell is a bovine or rabbit cell (see the specification at page 20, paragraph 41).

With respect to which genes to knock out so as to result in forming a nuclear transfer embryo comprised of cells that are incapable of differentiating into a particular cell lineage, applicant submits that some experimentation may be required. But the experimentation would not be undue. A person skilled in the art as of the priority filing date of this application would be able to figure out exactly what genes to pick, as the relevant tools were readily available to make such determination.

For the reasons stated above, the specification provides an enabling disclosure of the pending claims.

V. 35 U.S.C. § 112, SECOND PARAGRAPH REJECTIONS

For reasons detailed in the April 12, 2005 Office Action at page 11, claim 3, 22, 24 and 51 stand rejected under 35 U.S.C. 112, second paragraph as indefinite. Applicant has canceled claims 24 and 51, rendering moot their rejection.

With respect to claim 3, the Examiner contends that the recitation of "said . . . cells derived therefrom" lacks sufficient antecedent basis. Applicant has amended claim 3, as suggested by the Examiner, to recite the additional step of allowing said blastocyst or said morula, or cells derived from said blastocyst or said morula, to differentiate. This claim amendment does not introduce new matter. See originally filed claim 3.

The Examiner contends that the recitation "said blastocyst or morula" in claim 22 lacks in antecedent basis. Applicant has amended claim 22 to depend from claim 2. This claim amendment does not introduce new matter. See originally filed claim 1-2 and 22. The recitation "said blastocyst or morula" does not lack antecedent basis in amended claim 22.

Accordingly, amended claims 3 and 22 are not indefinite under 35 U.S.C. § 112, 2nd ¶.

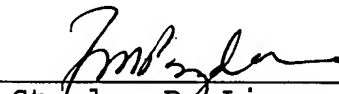
VI. ART -BASED REJECTIONS

For reasons detailed in the April 12, 2005 Office Action, claims 24 and 51 stand rejected under 35 U.S.C. § 102(b) as anticipated by the cited art (see the April 12, 2005 Office Action at pages 11-12). Applicant has canceled claims 24 and 51 without prejudice, rendering moot their rejection. Applicant reserves the right to prosecute claims directed to the canceled subject matter in this application or in other applications that claims priority from this application or a related application.

VII. CONCLUSION

For at least the reasons detailed above, applicant has overcome the objections and rejections detailed in the April 12, 2005 Office Action. Applicant requests that the Examiner reconsider and allow the pending claims.

Respectfully submitted,



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